

Appl. No. 09/945,146
Amendment dated July 22, 2004
Reply to Office action of May 18, 2004

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-21 (Cancelled)

Claim 22 (Currently Amended): A method of making a thin film keypad comprising:
forming at least one keycap attachment region on a thin film material, each said keycap attachment region including at least one molding material passage region, wherein forming said keycap attachment region includes cutting at least one flap from said thin film material to form said material passage region;

placing said thin film material into a molding tool having at least one keycap mold cavity such that each said molding material passage region is located within each said keycap mold cavity, respectively, wherein said molding tool includes a gate for injecting said molding material, and wherein said gate is inserted through said material passage region such that said gate moves said flap into said keycap mold cavity; and

injecting a molding material through said molding material passage region in said thin film material and into said keycap mold cavity such that at least one keycap is molded onto a top surface of said thin film material, and wherein said molding material flows around portions of said thin film material and hardens on opposite sides of said portions of said thin film material to form at least two anchor portions such that said keycap is mechanically secured to said thin film material, and wherein one of said anchor portions is formed by said molding material flowing around said flap and hardening on opposite sides of said flap.

Claim 23 (Original): The method of claim 22 further including cutting an outline of a retainer sheet from said thin film material such that said keycap is molded onto said retainer sheet.

Appl. No. 09/945,146
Amendment dated July 22, 2004
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Claim 24 (Original): The method of claim 22 wherein said molding material is selected from the group consisting of polycarbonate, polycarbonate/ABS blend, and ABS.

Claim 25 (Original): The method of claim 22 wherein said thin film material is selected from the group consisting of a polycarbonate material and a polyester material.

Claim 26 (Previously Presented): The method of claim 23 wherein forming each said keycap attachment region includes forming at least one hole through said thin film material, and wherein said retainer sheet is placed in said molding tool with said hole positioned between said keycap mold cavity and an anchor mold cavity such that said molding material flows through each said hole and around an edge of said thin film material to form one of said anchor portions.

Claim 27 (Cancelled)

Claim 28 (Cancelled)

Claim 29 (Currently Amended): A method of making a thin film keypad comprising:
forming a plurality of keycap attachment regions on a thin film material, each of said keycap attachment regions including at least one hole and at least one material passage region, wherein said material passage regions are formed by cutting flaps from said thin film material;
placing said thin film material into a molding tool including a female side having keycap mold cavities and a male side having anchor mold cavities, wherein said male side of said molding tool includes gates for injecting said molding material, wherein said retainer sheet is positioned such that said holes are located between respective said keycap mold cavities and said anchor mold cavities and such that said material passage regions are located within respective said keycap mold cavities, and wherein said gates are inserted through respective said material passage regions such that said gates move respective said flaps into respective said keycap mold cavities; and
injecting a molding material through said material passage regions in said thin film material and into said keycap mold cavities, wherein said molding material flows through said

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holes around said flaps and into said anchor mold cavities such that keycaps are molded onto a top surface of said thin film material and are mechanically secured to said thin film material.

Claim 30 (Original): The method of claim 29 wherein said thin film material is selected from the group consisting of a polycarbonate material and a polyester material, and wherein said molding material includes ABS.

Claim 31 (Cancelled)

Claim 32 (Original): The method of claim 29 wherein forming said material passage regions includes forming formed hole portions from said thin film material, wherein said male side of said molding tool includes gates for injecting said molding material, and wherein inserting said thin film material into said molding tool includes inserting said gates through respective said material passage regions such that said molding material flows around said formed hole portions.

Claim 33 (Original): The method of claim 29 further including cutting an outline of a retainer sheet from said thin film material such that said keycaps are molded onto said retainer sheet.